

Application Number 09/848,483
Amendment dated January 14, 2005
Responsive to Office Action mailed October 18, 2004

REMARKS

This amendment is responsive to the Office Action dated October 18, 2004. Applicant has amended claim 3 for reasons unrelated to patentability. Claims 1-45 are pending.

Claim Rejection Under 35 U.S.C. § 112

In the Office Action, the Examiner rejected claims 3 and 4 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner indicated that there is insufficient antecedent basis for the term "the switch array" in line 1 of claim 3.

Applicant generally disputes the Examiner's position that a term recited in the preamble of claim 1 does not provide antecedent basis for the term. To Applicants' knowledge, neither the Patent Office, nor any Court of Law has ever held that a term defined in the preamble of an independent claim cannot provide an antecedent basis within the meaning of 35 U.S.C. 112, second paragraph.

Claim 1 clearly recites that the apparatus is an apparatus for use in a switch array. Therefore, insofar as claim 3 clarifies that the switch array is a keyboard, claim 3 is directed to an apparatus for use in a keyboard. The fact that the term "switch array" appears in the preamble of claim 1, rather than the body, does not render claim 3 indefinite. Claim 3 further limits the switch array to a keyboard. A person of ordinary skill in the art would properly read claim 3 as being directed to an apparatus for use in a keyboard.

Nevertheless, in the interest of expediting prosecution of the application toward issuance, and for reasons unrelated to patentability, Applicants have amended claim 3 to further clarify this point for the Examiner. Claim 3 now recites that the switch array is a keyboard, such that the apparatus is an apparatus for use in a keyboard having spring elements. Claim 3 is definite within the meaning of 35 U.S.C. 112, second paragraph.

Claim Rejections Under 35 U.S.C. § 102 and 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1, 2, 5, 10 and 12-14 under 35 U.S.C. 102(b) as being anticipated by Finlayson (US 4,385,219) (hereafter Finlayson) and rejected claims 3, 4, 18, 20, 26, 27, 29, 31 and 38-45 under 35 U.S.C. 103(a) as being unpatentable over

BEST AVAILABLE COPY

Application Number 09/848,483
Amendment dated January 14, 2005
Responsive to Office Action mailed October 18, 2004

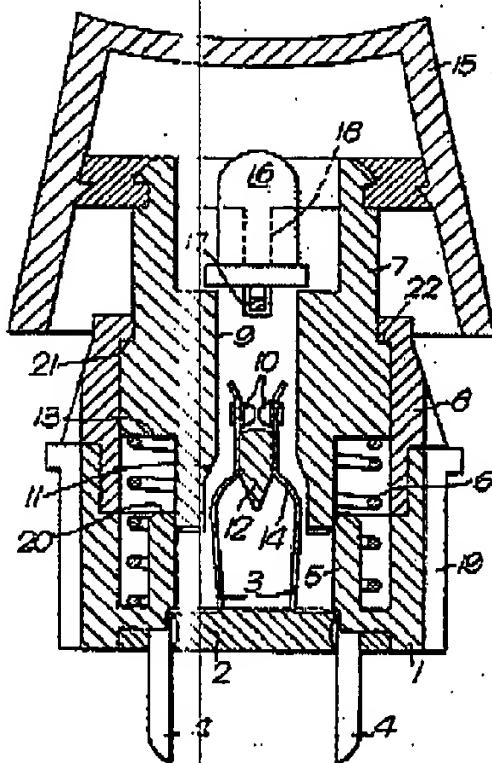
Finlayson. The Examiner objected to claims 6-9, 15-17, 19, 21-25, 28, 30 and 32-37 as including subject matter that would be allowable if rewritten in independent form.

Applicants respectfully traverse the Examiner's rejections. All pending claims recite structure that is clearly distinguishable from the structure of Finlayson. In particular, Finlayson fundamentally lacks a number of features recited in the pending claims. For this reason, all the current rejections are improper and must be withdrawn.

All pending claims require a bottom layer defining holes for aligning with spring elements, and a top layer engaged with the bottom layer and biased away from the bottom layer upon protrusion of the spring elements through the holes in the bottom layer. Finlayson lacks any teaching of this structure.

In the Office Action, the Examiner cited FIG. 1 of Finlayson as teaching a bottom layer defining holes for aligning with spring elements, and a top layer engaged with the bottom layer and biased away from the bottom layer upon protrusion of the spring elements through the holes in the bottom layer. FIG. 1 of Finlayson is copied directly below. A detailed analysis of the Examiner's interpretation of FIG. 1 of Finlayson follows.

Fig. 1.



Application Number 09/848,483
Amendment dated January 14, 2005
Responsive to Office Action mailed October 18, 2004

In the Office Action, the Examiner characterized items 1 and 5 as a bottom layer, and items 7 and 15 as a top layer engaged with the bottom layer. The Examiner characterized item 6 as being spring elements.

Again, all pending claims require a bottom layer defining holes for aligning with spring elements, and a top layer engaged with the bottom layer and biased away from the bottom layer upon protrusion of the spring elements through the holes in the bottom layer. No reasonable interpretation of Finlayson is even remotely suggestive of these features.

First, bottom layer (1 and 5) of Finlayson does not define holes for aligning with spring elements. For example, because only a single spring 6 is shown in Finlayson, the notion of holes for aligning with spring elements is completely lacking. Moreover, spring element 6 appears to be resting on top of elements 1 and 5, which the Examiner construes as the bottom layer. Thus, any holes in the bottom layer of Finlayson are not "holes for aligning with spring elements, as required by Applicant's claims, and spring element 6 cannot be reasonably construed as protruding "through" the bottom layer.

Second, the Examiner's interpretation of the junction of items 1 and 8 as being a hole is a misconstruction of Finlayson. In the Office Action, the Examiner interpreted the junction of items 1 and 8 as being a hole through the bottom layer, but specifically excluded element 8 as being part of the bottom layer in order to support this tenuous characterization. In general, Applicants respectfully submit that the Examiner's interpretation of the junction of items 1 and 8 as being a hole is a misconstruction of Finlayson, and appears to be nothing more than an attempt by the Examiner to reconstruct Applicant's claims using the prior art as a blueprint, which is improper. No reasonable interpretation of Finlayson would result in the junction of items 1 and 8 as being properly construed as a hole through the bottom layer. Instead, item 8 is attached to the bottom layer 1, 5, as construed by the Examiner. Clearly, the juncture of items 1 and 8 does not span "through" bottom layer 1, 5.

Third, Finlayson lacks any suggestion of spring elements that protrude through holes in the bottom layer. The only hole in the bottom layer (1, 5) that anything can protrude "through" appears to be the hole through which elements 2 and 10 protrude. Of course, elements 2 and 10 of Finlayson are not "spring elements" as required by Applicants' claims.

Application Number 09/848,483
Amendment dated January 14, 2005
Responsive to Office Action mailed October 18, 2004

Clearly, spring element 6 does not protrude through a hole in the bottom layer (1, 5). Again, the Examiner appears to be interpreting the junction of items 1 and 8 as being a hole. While Applicants strongly dispute that the junction of items 1 and 8 is a hole, Applicants note that even if the junction of items 1 and 8 were somehow interpreted as being a hole, spring element 6 still would not protrude through such a hole in bottom layer (1, 5). Again, spring element 6 appears to be resting on bottom layer (1, 5) of Finlayson, and for this reason, even if spring element 6 is interpreted as protruding out of bottom layer (1, 5), it cannot be properly construed as protruding "through" bottom layer (1, 5) because spring element 6 rests on element 1.

Fourth, the Examiner's statement that bottom layer (1, 5) is engaged with top layer 7 is flawed. In particular, it appears that element 8 engages with top layer 7, not elements 1 or 5. However, the Examiner has construed the bottom layer of Finlayson as including only elements 1 and 5, and excluding element 8, in an attempt to support a tenuous construction of Finlayson that the junction of items 1 and 8 define a hole through the bottom layer (1, 5). Therefore, based on the Examiner's construction of Finlayson that excludes element 8 from the bottom layer, bottom layer 1, 5 is not engaged with top layer 7 because element 8 engages with element 7.

Dependent claim 5 requires that the bottom layer and top layer define sets of hook-like elements that engage one another to define a distance of travel between the bottom layer and the top layer. In the Office Action, the Examiner construed items 13 and 20-22 of Finlayson as being hook-like elements. However, it is clear from FIG. 1 of Finlayson that items 13 and 20-22 do not engage one another. Moreover, Applicants dispute that items 13 and 20-22 are hook-like elements, as nothing about these items is hook-like.

Moreover, items 13 and 21-22 both appear to be components of element 7, which the Examiner construed as the top layer. Thus, any notion of hook-like elements on both the bottom and top layer that engage one another to define a distance of travel between the bottom layer and the top layer is completely lacking from even the Examiner's interpretation of Finlayson.

Applicants also again point out that the Examiner interpreted the bottom layer as including elements 1 and 5, but excluding element 8. Again, the Examiner appears to have made this interpretation in an attempt to maintain that the junction of elements 1 and 8 is a hole, so that element 6 might be construed as protruding "through" the hole in the bottom layer. Applicants

Application Number 09/848,483
Amendment dated January 14, 2005
Responsive to Office Action mailed October 18, 2004

again dispute this interpretation of the junction of elements 1 and 8 as being a hole, but also note that this tenuous interpretation would necessarily preclude any interpretation of elements 21 or 22 as being part of the bottom layer, since element 8 was purposely excluded by the Examiner as being part of the bottom layer in order to support the Examiner's position that spring element 6 protrudes through the bottom layer. Thus, based on the Examiner's interpretation, neither elements 13 nor elements 21 or 22 could be part of bottom layer 1, 5. Element 20 is not a hook-like element, and neither the top layer nor the bottom layer, according to the Examiner's interpretation of Finlayson, include hook-like elements that engage one another to define a distance of travel, as required by claim 5.

At this time, Applicants reserve further comment with regard to the other rejected dependent claims. Applicants believe that the analysis above clearly illustrates the many basic differences between Finlayson and the claimed invention. Properly construed, Finlayson lacks not one, but several features of Applicants' independent claims. For each of the reasons identified above, the Examiner's rejections must be withdrawn.

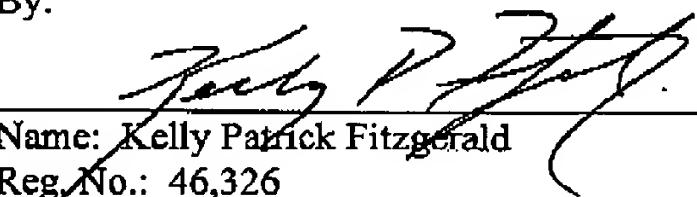
Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

Jan. 14, 2005

SHUMAKER & SIEFFERT, P.A.
8425 Seasons Parkway, Suite 105
St. Paul, Minnesota 55125
Telephone: 651.735.1100
Facsimile: 651.735.1102

By:


Name: Kelly Patrick Fitzgerald
Reg. No.: 46,326

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.